

AMENDMENTS TO THE CLAIMS

What is claimed is:

1. (currently amended) ~~Method~~ A method for applying a vibration damping layer to a heat shield ~~of a catalytic converter~~, comprising:
securing an uncoated heat shield to a catalytic converter in the exhaust system of an automotive vehicle.
running the engine of the vehicle;
locating regions of ~~the said~~ heat shield ~~with maximum resonance where high level of vibrations occur~~; and
applying a porous thermal spraying a coating of Al-Si onto the heat shield in the located regions, ~~the coating providing the vibration damping layer.~~
2. (currently amended) The method of claim 1, wherein the locating step includes identifying the regions with a laser vibration scan.
3. (cancelled)
4. (currently amended) The method of claim 1, wherein the composition of the Al-Si is in the range of about Al-Si 4% to Al-Si 18% by weight.
5. (original) The method of claim 1, wherein the composition of the Al-Si is about Al-Si 12%.
6. (original) The method of claim 1, wherein the heat shield is made of stainless steel.
7. (original) The method of claim 1, wherein the applying includes spraying the Al-Si coating with a thermal spray process.

8. (withdrawn) A heat shield for a catalytic converter, comprising:
a substrate; and
a coating made from Al-Si applied to the substrate to form an
mechanical bond between the substrate and the coating, the coating providing a
damping layer to reduce the peak resonances of the heat shield.
9. (withdrawn) The heat shield of claim 9, wherein the substrate is made of
stainless steel.
10. (withdrawn) The heat shield of claim 9, wherein the coating is made
from a eutectic Al-Si composition in the range of about Al-Si 4% to Al-Si 18 %.
12. (withdrawn) The heat shield of claim 10, wherein the Al-Si composition
is about Al-Si 12%.
13. (new) The method of Claim 1, wherein the locating step includes
measuring the level of vibration on said heat shield using a sound pressure recording.